

## **REMARKS**

The Examiner provides a number of restrictions and rejections; we list them here in the order in which they are addressed.

- I. Claims 27-29, 31 and 33-44 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement.
- II. Claims 27-29, 31, 33, 34, 36-42 and 44 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Kupper *et al.*
- III. Claims 35 and 43 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kupper *et al.*

### **I. The Claims Comply With The Written Description Requirement**

The Examiner states that:

The subject matter which was not described in the original specification was a “timing device configured to identify the origin of an arrhythmia” ... The original specification on page 11, line 21 is the only place that “timing device” is mentioned ... but is not mentioned to be “configured to identify the origin of an arrhythmia”.

*Office Action* pg. 3. The Applicants disagree. Nonetheless, without acquiescing to the Examiner's argument but to further the prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims, Applicants have amended Claims 27 and 37 to delete the “timing device” claim term. Further, Claims 27 and 37 are clarified by removing the unnecessary claim term “implantable cardiac defibrillator”. These amendments are made not to acquiesce to the Examiner's argument but only to further the Applicants' business interests, better define one embodiment and expedite the prosecution of this application.

The Examiner is respectfully requested to withdraw the present rejection.

## **II. The Claims Are Novel**

The Examiner states that:

Kupper discloses a pacemaker/defibrillator ... [that] ... necessarily does determine the earliest arriving electrical signal and the location of origin (atrium or ventricle) ... since following therapy it waits to sense a ventricular or atrial event ...

*Office Action pg 3 bridging pg 4.* The Applicants disagree as Kupper does not teach determining the origin of an arrhythmia based upon the determination of the earliest arriving signal. Nonetheless, without acquiescing to the Examiner's argument but to further the prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims, Applicants have amended Claims 27 and 37 to clarify that the pacemaker ... "is configured to discriminate between a supraventricular tachycardia and a ventricular tachycardia ...":

The present invention contemplates a novel capability that detects an earliest arriving electrical signal (i.e., an intracardiac electrogram) that discriminates between supraventricular tachycardia (SVT) and ventricular tachycardia (VT).

*Applicant's Specification pg 2 ln 28-30.* This amendment is made not to acquiesce to the Examiner's argument but only to further the Applicants' business interests, better define one embodiment and expedite the prosecution of this application. The Examiner should note that Claims 27 and 37 are further redrafted by incorporating the phrase "detected by said atrial distal tip electrodes or said ventricular distal tip electrodes" that was removed from step c).

As argued above, the Examiner is respectfully requested to note that the concept of "discriminating between a supraventricular tachycardia and a ventricular tachycardia by determining if an earliest arriving electrical signal was detected ..." was searched in

the International Search Report (ISR) under the instant PCT application (*supra*). In particular, the ISR identified two patents of relevance, neither of which anticipate, or make obvious, the currently amended claims.

In regards to US Patent No. 5,838,910, this technology discloses a device that is configured to measure the intervals between atrial depolarizations and ventricle depolarizations during a tachycardia in order to distinguish re-entrant nodal tachycardia from sinus tachycardia. The '910 patent does not describe a device configured to detect an earliest arriving electrical signal to determine the whether the cardiac origin of the tachycardia is from the atria or from the ventricle.

In regards to US Patent No. 5,476,482, this technology discloses a stand-alone computer that receives telemetered pacemaker data in order to determine whether retrograde conduction is occurring in the patient. The '482 patent does not describe a device configured to detect an earliest arriving electrical signal to determine the whether the origin of the tachycardia is from the atria or from the ventricle.

In conclusion, the Applicant submits that the claim terms of discriminating between "supraventricular tachycardia" and/or "ventricular tachycardia" in the context of determining the earliest arriving electrical signal has been fully searched and is on the record of the instant application.

Consequently, the Applicants respectfully request that the Examiner withdraw the pending rejection.

### **III. Claims 35 and 43 Are Not Obvious Over Kupper**

The Examiner states that:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the IMD as taught by Kupper ...

*Office Action pg 4 bridging pg 5.* The Applicants disagree because the Examiner is referring to dependent claims. Because the respective independent claims (i.e., Claims 27 and 37, respectively) have not been rejected as obvious, the dependent claims are non-obvious as well:

Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.

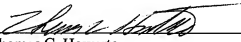
*In re Fine*, 837 F.2d 1071, 1076, 5 USPQ2d 1596 (Fed. Cir. 1988). Consequently, the Applicants respectfully requests that the Examiner withdraw the present rejection.

### CONCLUSION

Based on the arguments provided above, Applicants believe that the Claims 27-29, 31 and 33-44 are in condition for allowance. Should the Examiner believe a telephone interview would aid in the prosecution of this application, the Applicants encourage the Examiner to call the undersigned at 781-828-9870.

Respectfully submitted,

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